

May 24, 2017

Ms. Tina Green
BC Laboratories
4100 Atlas Ct.
Bakersfield, CA 93308

RE: Project: 1711473
Pace Project No.: 30217991

Dear Ms. Green:

Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This test is accredited under the laboratory's DoD ELAP accreditation issued by the Laboratory Accreditation Bureau (L-A-B). Refer to certificate and scope of accreditation L2417

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Carin Ferris
carin.ferris@pacelabs.com
724-850-5615
Project Manager

Enclosures

cc: Ms. Christina Herndon, BC Laboratories



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

CERTIFICATIONS

Project: 1711473
Pace Project No.: 30217991

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE SUMMARY

Project: 1711473

Pace Project No.: 30217991

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30217991001	DUP01_170427	Water	04/27/17 08:50	05/05/17 10:10
30217991002	EB09_170427	Water	04/27/17 14:30	05/05/17 10:10
30217991003	M026A-R_170427	Water	04/27/17 08:45	05/05/17 10:10

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SAMPLE ANALYTE COUNT

Project: 1711473

Pace Project No.: 30217991

Lab ID	Sample ID	Method	Analysts	Analytes Reported
30217991001	DUP01_170427	EPA 900.0	NEG	2
30217991002	EB09_170427	EPA 900.0	NEG	2
30217991003	M026A-R_170427	EPA 900.0	NEG	2

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

PROJECT NARRATIVE

Project: 1711473
Pace Project No.: 30217991

Method: EPA 900.0
Description: 900.0 Gross Alpha/Beta
Client: BC Laboratories
Date: May 24, 2017

General Information:

3 samples were analyzed for EPA 900.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 1711473
Pace Project No.: 30217991

Sample: DUP01_170427 **Lab ID:** 30217991001 Collected: 04/27/17 08:50 Received: 05/05/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	11.7 ± 4.08 (2.99) C:NA T:NA	pCi/L	05/23/17 10:49	12587-46-1	
Gross Beta	EPA 900.0	16.6 ± 3.75 (2.75) C:NA T:NA	pCi/L	05/23/17 10:49	12587-47-2	

Sample: EB09_170427 **Lab ID:** 30217991002 Collected: 04/27/17 14:30 Received: 05/05/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	0.318 ± 0.489 (1.04) C:NA T:NA	pCi/L	05/23/17 08:33	12587-46-1	
Gross Beta	EPA 900.0	0.907 ± 0.844 (1.73) C:NA T:NA	pCi/L	05/23/17 08:33	12587-47-2	

Sample: M026A-R_170427 **Lab ID:** 30217991003 Collected: 04/27/17 08:45 Received: 05/05/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:
Comments: • The sampler's name and signature were not listed on the COC.

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Gross Alpha	EPA 900.0	12.0 ± 4.24 (2.92) C:NA T:NA	pCi/L	05/23/17 08:32	12587-46-1	
Gross Beta	EPA 900.0	16.4 ± 3.84 (3.16) C:NA T:NA	pCi/L	05/23/17 08:32	12587-47-2	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL - RADIOCHEMISTRY

Project: 1711473

Pace Project No.: 30217991

QC Batch:	258806	Analysis Method:	EPA 900.0
QC Batch Method:	EPA 900.0	Analysis Description:	900.0 Gross Alpha/Beta
Associated Lab Samples:	30217991001, 30217991002, 30217991003		

METHOD BLANK:	1274780	Matrix:	Water
Associated Lab Samples:	30217991001, 30217991002, 30217991003		

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Gross Alpha	0.142 ± 0.726 (1.84) C:NA T:NA	pCi/L	05/19/17 06:46	
Gross Beta	0.229 ± 0.765 (1.81) C:NA T:NA	pCi/L	05/19/17 06:46	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

QUALIFIERS

Project: 1711473
Pace Project No.: 30217991

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

SUBCONTRACT ORDER

BC Laboratories

1711473

SENDING LABORATORY:

BC Laboratories
4100 Atlas Court
Bakersfield, CA 93308
Phone: 661-327-4911
FAX: 661-327-1918
Project Manager: Tina Green

RECEIVING LABORATORY:

PACE Analytical
1638 Roseytown Road, Ste 2,3 &4
Greensburg, PA 15601
Phone: (724) 850-5600
FAX: (724) 850-5601

PACEA

Analysis	Due	Expires	Comments
Sample ID: 1711473-01 EPA 900.0 Gross Alpha/Beta	Water 05/11/17 17:00	Sampled: 04/27/17 08:50 10/25/17 08:50	clp DOD/Level IV/ Groundwater/ CA / NEED EQUIS EDD/ ID =DUP01_170427
Containers supplied: OF metals			
Sample ID: 1711473-03 EPA 900.0 Gross Alpha/Beta	Water 05/11/17 17:00	Sampled: 04/27/17 14:30 10/25/17 14:30	clp DOD/Level IV/ Groundwater/ CA / NEED EQUIS EDD/ ID =EB09_170427
Containers supplied:			
Sample ID: 1711473-04 EPA 900.0 Gross Alpha/Beta	Water 05/11/17 17:00	Sampled: 04/27/17 08:45 10/25/17 08:45	clp DOD/Level IV/ Groundwater/ CA / NEED EQUIS EDD/ ID=M026A-R_170427
Containers supplied:			

WO# : 30217991



Ⓢ Use Sample ID's as Sample descriptions

Released By [Signature] Date 5.1.17 Received By Whelan/Pace Date 5-5-17/1010

Released By _____ Date _____ Received By _____ Date _____

Sample Condition Upon Receipt Pittsburgh

ANL



Client Name:

BC Labs

Project #

30217991

Courier: ☐ Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 12 965 376 03 628 0750

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☒ no

Thermometer Used

N/A

Type of Ice: Wet Blue None

Cooler Temperature Observed Temp: _____ °C Correction Factor: _____ °C Final Temp: _____ °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: AKR 5-5-17

Comments:

	Yes	No	N/A	
Chain of Custody Present:	X			1.
Chain of Custody Filled Out:	X			2.
Chain of Custody Relinquished:	X			3.
Sampler Name & Signature on COC:		X		4.
Sample Labels match COC:	X			5.
-Includes date/time/ID Matrix:	X			
Samples Arrived within Hold Time:	X			6.
Short Hold Time Analysis (<72hr remaining):		X		7.
Rush Turn Around Time Requested:		X		8.
Sufficient Volume:	X			9.
Correct Containers Used:	X			10.
-Pace Containers Used:		X		
Containers Intact:	X			11.
Orthophosphate field filtered			X	12.
Organic Samples checked for dechlorination:			X	13.
Filtered volume received for Dissolved tests			X	14.
All containers have been checked for preservation.	X			15.
All containers needing preservation are found to be in compliance with EPA recommendation.	X			PH12
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed: <u>AKR</u> Date/time of preservation: _____
				Lot # of added preservative: _____
Headspace in VOA Vials (>6mm):			X	16.
Trip Blank Present:		X		17.
Trip Blank Custody Seals Present			X	
Rad Aqueous Samples Screened > 0.5 mrem/hr		X		Initial when completed: <u>AKR</u> Date: <u>5-5-17</u>

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

☐ A check in this box indicates that additional information has been stored in ereports.

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

*PM review is documented electronically in LIMS. When the Project Manager closes the SRF Review schedule in LIMS. The review is in the Status section of the Workorder Edit Screen.